QUALITY CONTROL PLAN APPROVAL

~~Approval~~ Recommended:

for Chuck Rairdan 10/5/06
Project Manager Date

Dave Neff 10/5/06
Lead Designer Date

EMAIL APPROVED 10/5/06
Grigor Grigorian Date
ITRT Chairman

Randall G. Redeen 10/5/06
Acting Chief, Design Branch Date

Miki Fujitsubo 10/5/06
Lead Planner Coordinator Date

Frank Piccola 10/5/06
Acting Chief, Water Resources Branch Date

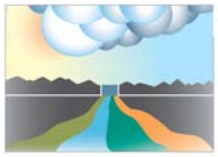
Approvals:

____Approved ____Disapproved

Thomas E. Trainer 10/5/06
Thomas E. Trainer, Chief, Engineering Division Date

✓ Approved ____Disapproved

E Scott Clark 10/5/06
Scott Clark, Acting Chief, Planning Division Date



AMERICAN RIVER WATERSHED PROJECT

QUALITY CONTROL PLAN

FOLSOM MODIFICATION AND FOLSOM DAM RAISE PROJECTS
Post-Authorization Change and Engineering Documentation Reports (PAC/EDR)

05 October 2006

Sacramento District
U.S. Army Corps of Engineers

QUALITY CONTROL PLAN

FOLSOM MODIFICATION AND FOLSOM DAM RAISE PROJECTS
Post-Authorization Change and Engineering Documentation Reports (PAC/EDR)

05 October 2006

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QUALITY CONTROL PLAN

FOLSOM MODIFICATION AND FOLSOM DAM RAISE PROJECTS
Post-Authorization Change and Engineering Documentation Report (PAC/EDR)

05 October 2006

1. **Authorization/Project Objectives:** Study of the American River Watershed by the Corps was authorized in the Flood Control Act of 1962 (Public Law 87-874) with direction from Congress given to the Corps to survey for flood control and allied purposes. More specific direction from Congress was provided in Section 101(a) (1) of the Water Resources Development Act of 1996 (WRDA 1996), Section 566 of WRDA 1999 and in Section 128 of the Energy and Water Development Act of 2004.

   As a result of the 1991 American River Watershed study, Congress authorized three projects for the American River Watershed Investigation. These are the Common Features Project, the Folsom Dam Modifications Project, and the Folsom Dam Mini-Raise Project. The projects would increase flood protection provided to the Sacramento area along the main stem of the American River. The Common Features Project, which involves primarily levee modification work along the lower American and Sacramento rivers, will reduce the probability of flooding in Sacramento to 1 in 100 for any given year. The Folsom Dam Modifications project would further reduce the probability of flooding in Sacramento in any one year to 1 chance in 140. Beyond these projects, the Folsom Dam Mini-Raise Project would reduce the probability of flooding to approximately 1 in 200 in any given year, which is the goal of the non-Federal sponsors. The objective of the Corps is to provide increased flood damage reduction consistent with Federal planning principles and guidelines. In addition to flood damage reduction, a secondary objective is to restore degraded habitat conditions in the lower American River through ecosystem restoration. Design elements of work associated with the raising of Folsom Dam as well as the downstream ecosystem restoration work are briefly described in the Project Management Plan.

   Since three separate projects were authorized for the American River Watershed, the Corps has been proceeding with studies based on the projects being individual projects, standing on their own merits. During the same time, the United States Bureau of Reclamation (USBR) has also been proceeding with dam safety studies to bring Folsom Dam up to current standards with the ability to pass the spillway design flood (PMF) safely. However, during 2005, the desirability of taking a more comprehensive look at potential features from the USBR and the entire Corps' authorized projects with a view towards optimizing flood control and dam safety became evident. To achieve this, a Project Alternative Solutions Study (PASS) team was formed and had their first meeting on September 7, 2005.

The Corps, USBR, and Sponsors have been working together at all levels to assure their respective and joint goals and objectives are met. The PAC and accompanying EDRs make up the Corp decision document for both Folsom Modification Project and Folsom Dam Raise Project. The USBR will prepare a modification report that is their decision document on dam safety. The two agencies are jointly preparing a single EIS/EIR that is scoped to include not only the JFP, but other features that are the sole responsibility of USBR or Corps.

2. **Description of Products:** This QCP includes preparation of the Post Authorization Change/Engineering Documentation Report (PAC/EDR) report which is being prepared by the Corps of Engineers and will be forwarded to Headquarters for review and submittal to Congress for authorization.

3. **Name and Location of Project Non-Federal Sponsor for Flood Damage Reduction:**

The Reclamation Board
State of California
1416 Ninth Street, Room 1148
Sacramento, CA 95814-5509
Phone: (916) 653-5434
FAX: (916) 653-9745

Sacramento Area Flood Control Agency
1007 Seventh Street, 7th Floor
Sacramento, CA 95814
Phone: (916) 874-7606
FAX: (916) 874-8289

4. **Objectives:** The objective of the quality control plan is to ensure the PAC/EDR documents for the Folsom Modification and Folsom Dam Raise Projects is of high quality. The Corps is committed to the very highest standards of quality in planning products and design services rendered. This commitment must be manifested in the attitude of the staff at all levels of project involvement. Achievement of quality control is first and last a management attitude and is given substance in the application of established procedures and standards. The procedures, standards, and checklists outlined in this program are based on industry practices, Corps planning, engineering and construction policies, and regulations that have been found to be conducive to good quality control. The purpose of the QCP is to define and achieve the following goals and objectives.

    a. Assure production of high quality engineering design and construction documents that comply with customer and Corps requirements and meet the customer's expectations on schedule and within budget.
    b. Consistently provide high quality planning services and products on schedule and within budget, consistent with regulations, policies, guidelines, procedures, and client needs, whether produced by Planning Division in-house staff or contractors, and ensure that PD personnel recognize applicable lessons learned and to see that these are incorporated into the process.

c. Maintain and improve awareness of all planning, design and construction personnel of the need for and their responsibility for strong upfront QC (Quality Control) procedures.
d. Produce effective and coordinated documentation.
e. Effectively and efficiently focus on doing the job right the first time, followed with an efficient check and review system.
f. Define the roles, responsibilities, and the accountability of Project Development Team (PDT) members and Independent Technical Review Team (ITRT) members for quality control.
g. Address cooperative efforts of PDT and ITRT members for accomplishing Seamless Review efforts throughout the product development phase.
h. Define interagency coordination in regards to quality control.
i. Reduce construction cost growth by "acting" to control quality during the design phase rather than "reacting" to problems during construction.
j. Promote safety and the well being of the public.

The independent technical review under this QCP does not replace the need for conducting design checks or supervisory review of products.

5. Quality Guidelines: Quality control is defined as the evaluation of technical products and processes to ensure that they comply with applicable laws, Corps planning, engineering and construction regulations and policies, sound technical practices of the disciplines involved, and customer requirements and expectations. Commensurate with the higher profile and risk associated with this particular project, review of the planning documents and critical design features will receive a high level of technical quality verification by the disciplines involved in the work decisions for each discipline. Products will be reviewed to ensure that the following objectives are met:

a. The recommended plan is economically and technically feasible and environmentally acceptable, is compatible with existing projects, and will be safe, functional, and meet the project's authorized purpose and customer requirements,
b. The planning and engineering concepts are valid,
c. Appropriateness of all planning, engineering and design assumptions and methods,
d. The planning and engineering analyses are correct,
e. The design complies with engineering policy and criteria requirements,
f. The recommended plan and design complies with accepted engineering practice within USACE, and
g. The cost estimate is reasonable.

In general, the following guidance will be followed for the technical review:

a. Quality Management Plan for Sacramento District
b. ER 1110-1-12, Engineering and Design Quality Management
c. ER 1110-1-8159, Engineering and Design Dr Checks

d. ER 1110-2-1150, Engineering and Design for Civil Works
e. ER 1105-2-100, Planning Guidance Notebook
f. EC 1165-2-203, Implementation of Technical Policy Compliance Review
g. CESPD R 1110-1-8, Quality Management Plan
h. CESPK-ED, Quality Management Plan
i. ER 1110-1-12, Quality Management for Engineering and Design
j. ER 200-2-2, Procedures for Implementing NEPA
k. ER 1165-2-501, Civil Works Ecosystem Restoration Policy

6. Product Development Team:

a. The Project Manager and PDT leader is Chuck Rairdan (916) 557-7833. The Engineering Division Lead Engineer for this work is Dave Neff, Design Branch (916) 557-7636; the Planning Coordinator is Miki Fujitsubo, Water Resources Branch (916) 557-7440.
b. Due to the complexity of the project and the involvement of numerous design disciplines, design leads have been assigned responsibility for developing certain work products. Identification of the design leads, their discipline, and work product responsibility, and members of the product development team (PDT) are provided in Appendix A. The design leads are shown in bold in Appendix A.
c. The design leads in consultation with the Engineering Division Lead Engineer and the Project Manager will be responsible for management of any engineering/design A-E scopes of work. The Plan Formulation leader, in consultation with the Project Manager, will be responsible for management of any planning A-E scopes of work.
d. The state and local sponsors are each providing representatives to participate as part of the PDT.

7. Peer and Seamless Reviews: During product development, seamless review is encouraged between PDT and ITRT counterparts for all disciplines involved in the development effort. Seamless reviews are to be initiated by the PDT members, at appropriate times, to discuss with their ITRT counterparts such things as: without-project conditions assumptions; economic and risk-based analysis criteria; plan formulation decisions; environmental evaluation; major design assumptions; functional decisions; analytical approaches; and significant calculations and results in order to reach a common understanding and preclude significant comments/impacts from occurring during final independent technical review. Although several of the engineering technical disciplines working on the American River projects are assigned to the (multi-disciplined) American River Section, the Section Chiefs representing each of the technical disciplines will provide in-progress design checks, advice, and supervisory review of the products.

8. Independent Technical Review Team and Panel of Experts: The ITR team members are listed in Appendix B**.** ER 1110-1-12 states that "ITR should be performed outside of the responsible command for large and/or complex projects, high-risk projects,

and when the responsible command does not have sufficient resources to conduct proper ITR". Therefore, most of the ITRT members (especially those representing disciplines that have a major part in designing the project features) will be selected from outside the Sacramento District. DrChecks will be used for managing and documenting the ITR comments, evaluations, and back checks and the resolution of controversial comments.

a. Review Team Members: The ITRT reviewers must have a minimum of five years experience in the discipline and not be involved in the product development or supervision thereof. For the disciplines that play a crucial part in the project, Subject Matter Experts (SME's) are preferred for filling the ITRT roster. In most cases, reviewers will be considerably more experienced in their discipline. Sacramento District functional chiefs of the technical disciplines involved in product development nominate review team members and their replacements should the need arise. The ITRT lists provided in Appendix B will be updated as needed on a periodic basis to reflect any changes to the ITRT roster.

b. Review Team Leader: The ITRT Leader is Grigor Grigorian of the Los Angeles District. The review team leader is responsible for coordinating all activities of the review team. The review team leader will communicate with the ITRT to make sure they know their responsibilities and objectives. The review team leader shall review the products and ITRT comments, product development team responses and back check of responses to reviewer's comments to identify any outstanding disagreements between members of the product development team and the ITRT. When a comment seems inappropriate, the team leader should discuss it with the reviewer, and possibly have the comment withdrawn by the reviewer. The review team leader will also eliminate any mutually conflicting comments and consolidate similar or related comments.

c. Facilitator: Because of the complex nature and tight project schedule, the ITRT will utilize an outside facilitator to expedite the review process. SPK will contract with an A-E firm for the facilitator who will be responsible for completion of the ITR in the allotted time and resolution of project issues.

d. A-E Firms and Outside Design Agencies: In order to maintain design responsibility, outside design organizations such as A-E firms and the USBR shall be responsible for the QC of their own work. Each organization's work products will be independently reviewed under their respective QC procedures, and each organization will provide QC certification for their respective sub-products to Dave Neff, Lead Engineer for the Corps' Engineering Division, or to Miki Fujitsubo, Lead Planning Coordinator for the Corp's Planning Division. The use of DrChecks to manage and document QC comments is also recommended. The Corps will make DrChecks available to A-E Firms and outside design agencies for this report review.

e. Panel of Experts: During preparation of the Engineering Documentation Report (EDR), a panel of experts will be in place to insure the highest level of technical excellence.

9. **External Peer Review:** In addition to and parallel with the ITR, an External Peer Review (EPR) team will be utilized. The guidelines and criteria for EPR are presented in EC 1105-2-408 which states in part: "External Peer Review (EPR) is herein added to the Corps existing review process in special cases where the risk and magnitude of the proposed project are such that a critical examination by a qualified person or team outside of the Corps and not involved in the day to day production of a technical product is necessary." The Corps Policy Centers of Expertise are responsible for the accomplishment and quality of EPR for the PAC/EDR. Members of the Consultants Review Board used by Reclamation will be utilized for the EPR by the Corps as well as industry experts. The American River Design Section will be responsible for the External Peer Review and be coordinated with Planning Division.

10. Guidelines and Documentation of Review Comments: The products will be reviewed using an interdisciplinary team approach. The products will be reviewed for scope, adequate level of detail, compliance with guidelines and policy and customer needs, consistency, accuracy, and comprehensiveness. Review comments should be constructive in nature, relevant to the product and should contain the following elements: (a) a clear statement of the concern; (b) the basis for the concern; (c) the significance of the concern, and (d) the specific actions needed to resolve the concern. Reviewers must identify any significant deficiency. Comments should be limited to those that are required to ensure adequacy of the product in meeting the review objectives. It is not within the reviewer's purview to attempt to direct the development effort by basing comments on personal preferences or those unsupported by Corps policy, criteria or guidance. All members of the ITRT are expected to raise concerns in other functional areas when appropriate. Typographic errors and other minor stylistic changes should not be part of the formal technical review comments. Such comments will be provided separately to the PDT for their use and to the ITRT leader. A partial checklist for reviewers to consider is as follows:

a. Constructability versus review against actual site conditions,
b. Maintainability review by the USBR,
c. Accuracy and reasonableness test of computations,
d. Quality and accuracy of the planning study processes,
e. Compliance with governing policies, criteria, and project requirements,
f. Seamless review (discussions and agreements with PDT counterparts), and
g. Product review comment/response/actions taken are documented in Dr Checks.

11. Comment Resolution: Review comments do not necessarily have to be complied with, but each comment must be resolved. When a PDT member disagrees with a comment, the PDT member will try to resolve the comment through discussions with the ITRT member. The ITR team leader will help facilitate those discussions as needed.

When this does not result in resolution, the issue will be elevated through the PDT member's chain of command as necessary. If this level of interaction does not resolve the issue, the responsible Functional Chief will make the final decision. The Functional Chief may consult with the Branch Chief, CESPD (Corps of Engineers South Pacific Division) staff, SME's, or other appropriate sources. Resolution of disputes will be documented in DrChecks as appropriate.

12. Technical and Policy Issue Resolution: Issues involving technical and policy interpretation shall be brought to the attention of the chief of the functional element for resolution. In some cases the chief of the responsible functional element may request that CESPD hold an issue resolution conference to resolve major policy or technical issues. CESPD may also arrange for HQUSACE participation in the issue resolution conference.

13. Certification : For final products, a certification signed by the A-E (if appropriate), Engineering Division Lead Engineer, Planning Division Chief, the ITRT leader, the Project Manager (PDT Leader), other functional chiefs at the Section and Branch levels, as appropriate, the Chief of Engineering Division, Office of Counsel, and the District Commander stating that issues raised by the ITRT have been resolved is required. Standard Corps certification forms will be used.

14. Unique, Sensitive or High Visibility Items: The planning environment for developing a flood damage prevention plan under the two authorities for modifying Folsom Dam is highly complex. Also, an inadequate or deficient design has the potential to significantly impact life and property. Therefore, it is imperative that the Sacramento District provide a total quality product. Following are some of the unique and highly sensitive aspects of the project:

a. Two Federal agencies, the Corps of Engineers and the Bureau of Reclamation, have jurisdiction over Folsom Dam for their respective responsibilities of flood damage prevention (FDR) and dam safety (DS). This project is somewhat unique in that the modifications needed for FDR and DS involve the same site. Developing a project at Folsom Dam involves the combined efforts of the Corps and USBR each with different policies concerning cost allocation, hydraulic dam safety and other areas.

b. The product is two decision documents for two separate authorities under one cover. The authorities are treated separately with separate cost estimates and 902 limits.

c. The EIS scope is broader than the PAC. Thus, its alternatives are different than alternatives in the PAC. The EIS however is inclusive of the PAC alternatives.

d... The Sacramento District has not designed and constructed submerged tainter gates of the size, head, and complexity proposed for the auxiliary spillway.

e. The dam raise portion of the project involves significant modifications to an existing high concrete dam and placing large tainter gates. State of the art design and construction techniques will be required.

f. Construction of the project must minimize impacts to the ongoing operation of Folsom Dam for flood control, water supply, environmental releases, hydropower, recreation and adverse traffic impacts resulting from the transport of borrow materials to the dam site.

g. The resolution of existing dam safety concerns will be an integral part of design and construction involving close coordination with the non-Federal sponsors and the Bureau of Reclamation.

h. The work will require numerous design and construction procurements done under an aggressive schedule, for the type of project.

15. Products for Review: The independent technical review (ITR) team will review the following documents:

- Draft Post Authorization Change (PAC) Document
- Final Technical Appendices - Engineering Documentation Reports (EDRs) for the Folsom Dam Modifications, Folsom Dam Raise and Joint Federal Projects.

An ITR will be done for the PAC and the three EDRs but not the USBR modified EIS. The three EDR reports will provide engineering support for the PAC. The three EDR reports are: Folsom Modification EDR, the Folsom Dam Raise EDR, and the JFP EDR. The EIS will be reviewed for consistency and have a separate technical review.

Note: The EIS is being reviewed under a separate process but will be available to the ITRT. A teleconference will be held at SPK. A final conference will held if necessary.

16. Major Milestones: Major milestones are listed in Table 1 below.

Table 1
Document Review Milestones

2006	
4 Oct	ITR and External Peer Review (EPR) preview of Folsom Joint Federal Project (video teleconference)
10 Oct	Draft PAC/EDR available electronically (CD/ftp)
11 Oct	AFB and Policy Guidance Memo
11 Oct	Draft PAC/EDR hard copies available/distributed
11 Oct	Corps and Reclamation exchange draft reports for cross-walk review
11 – 20 Oct	USBR/Corps cross-walk review
	ITR of Draft PAC/EDR
	EPR of Draft PAC/EDR
12 -20 Oct	Respond to AFB comments
19 Oct	Cross-walk issue resolution conference
20 Oct	**ITR and EPR comments due**
23 – 27 Oct	**Review and prepare/coordinate responses to ITR/EPR comments**

30 Oct - 3 Nov	**Onsite ITR and EPR issue resolution conferences**
6 - 9 Nov	**Backcheck unresolved ITR and EPR comments (last resort)**
	ITR Certification
13 - 17 Nov	Final revisions to Draft PAC/EDR Report to incorporate review comments
18 - 21 Nov	Print Public Draft PAC/EDR
27 – 30 Nov	Transmit/Publish Public Draft PAC/EDR and EIS/EIR for Review

2007 (All dates subject to change and update)

01 Dec- 12 Jan 07	HQ Review
16 – 29 Jan	Final Resolution Conference & PGM
17 Jan	Joint OMB Briefing
23 Jan – 05 Feb	Incorporate Review Comments
06 -12 Feb	Final ITR and Backcheck
13 – 26 Feb	Finalize PAC / EDR Documents
TBD Feb	Prepare for CWRB
TBD Mar	Transmit Final Report to SPR w/ Briefing
21 Mar	CWRB (DE Presentation)
22 Mar-TBDApr	Revise and Print Finalize PAC/EDR
30 Mar	Final EIS/EIR
30 Apr	Draft Record of Decision
TBD	Final Record of Decision
TBD	Joint OMB Briefing (Pre-Final Reports)
TBD	Chief's Recommendation to ASA (CW)
30 Jun	Complete

17. Special Interest Items: None

18. Constraints on the Process: The schedule is an expedited one but achievable. Joint efforts between Corps and Reclamation require close coordination and cooperation. Means for tracking progress and enhancing communication, coordination, and documentation are in place for the project. If unforeseeable events occur that are significant enough to jeopardize meeting schedules, the Project Manager, appropriate Planning and Engineering Division personnel, the Corporate Sponsor along with any other team members that are needed will together discuss the problem and what options are available. Increases in resources and/or changes the schedule as a result of these meetings will be documented and kept in the project electronic files.

19. Financial Resources for Quality Control Process: Funds have been budgeted for the Independent Technical Review Team. The cost breakdown for the District quality control review by functional area is provided in Table 2 below.

Table 2

Financial Resources for ITR Quality Control Process

Functional Review Area	Time in Days	Rate/Day	Funding
Review Management	**5**	**$800**	**$4000**
Hydraulics	**5**	**$800**	**$4000**
Hydrology	**3**	**$800**	**$2400**
Water Management	**5**	**$800**	**$4000**
Structural Design	**5**	**$900**	**$4500**
Electrical Design	**5**	**$800**	**$4000**
Mechanical Design	**5**	**$800**	**$4000**
Civil Design	**5**	**$800**	**$4000**
Geotechnical Conc Mtls	**5**	**$800**	**$4000**
Geotech Rock Mech	**5**	**$800**	**$4000**
Geotech Embankment	**5**	**$800**	**$4000**
Real Estate	**5**	**$800**	**$4000**
Constructability	**4**	**$800**	**$3200**
Environmental	**5**	**$800**	**$4000**
Cost Engineering	**5**	**$800**	**$4000**
Plan Formulation	**5**	**$800**	**$4,000**
Economics	**5**	**$800**	**$4,000**
Cost Distribution	**5**	**$800**	**$4,000**
Per Diem & Travel Costs			**$8000**
Total Cost			**$78,100**

20. Known Policy Questions: In-progress review (IPR) meetings are conducted bi-weekly and include PDT members and representatives from SPD and HQUSACE. Policy questions are addressed during these meetings

21. Consistency Review: Consistency check between planning, environmental and engineering concerns/documents will be included in all review by the ITRT. The consistency reviews will be a primary responsibility of the Environmental (Planning) review members.

AMERICAN RIVER WATERSHED PROJECT

FOLSOM MODIFICATION AND FOLSOM DAM RAISE

QUALITY CONTROL PLAN

APPENDIX A

PRODUCT DEVELOPMENT TEAM

Post Authorization Change and Engineering Documentation Project (PAC/EDR)

Post Authorization Change and Engineering Documentation Report (PAC/EDR)

PDT

	Name/ Organization		E-Mail	Phone
Project Management	Chuck Rairdan **USACE**	1325 J Street Sacramento, CA 95814	chuck.c.rairdan@usace.army.mil	(916) 557-7833 (916) 557-7848 FAX
Lead Designer (Engineer)	Dave Neff USACE	1325 J Street Sacramento, CA 95814	david.l.neff@usace.army.mil	(916) 557-7636 (916) 557-7850 FAX
Hydrology/ Hydraulics	Bob Vrchoticky USACE - Hydraulics	1325 J Street Sacramento, CA 95814	robert.d.vrchoticky@uasec.army.mil	(916) 557-7336 (916) 557-7846 FAX
	Harold Huff USACE - Hydraulics	1325 J Street Sacramento, CA 95814	harold.c.huff@usace.army.mil	(916) 557-6946 (916) 557-7846 FAX
	Marchia Bond USACE – Water Mgt	1325 J Street Sacramento, CA 95814	marchia.v.bond@usace.army.mil	(916) 557-7127 (916) 557-7863 FAX
	Kyle Keer USACE – Water Mgt	1325 J Street Sacramento, CA 95814	kyle.j.keer@usace.army.mil	(916) 557-7105) (916) 557-7863 FAX
Mechanical/ Electrical	**Stephen Slinkard** USACE - Mechanical	1325 J Street Sacramento, CA 95814	steven.D.Slinkard@usace.army.mil	(916) 557-7394 (916) 557-7841 FAX
	John Parrish USACE - Electrical	1325 J Street Sacramento, CA 95814	john.R.Parrish@usace.army.mil	(916) 557-7223
Planning	**Tom Adams** USACE	1325 J Street Sacramento, CA 95814	thomas.r.adams@usace.army.mil	(916) 557-6716 (916) 557-7856 FAX
	Miki Fujitsubo USACE	1325 J Street Sacramento, CA 95814	miki.Fujitsubo@usae.army.mil	(916) 557-7440 (916) 557-7856 FAX
Review Coordinator	Alicia Kirchner USACE	1325 J Street Sacramento, CA	alicia.E.Kirchner@usace.army.mil	916-557-6767
Economics	Ignatius Anyanwu USACE	1325 J Street Sacramento, CA 95814	ignatius.C.Anyanwu@usace.army.mil	916-557-6931 (916) 557-7856 FAX

	Gary Bedker USACE	1325 J Street Sacramento, CA 95814	gary.M.Bedker@usace.army.mil	916-557-6707 (916) 557-7856 FAX
Environmental/SHPO/Recreation	**Frank Piccola** USACE	1325 J Street Sacramento, CA 95814	francis.c.piccola@usace.army.mil	(916) 557-6735
	Becky Victorine USACE	1325 J Street Sacramento, CA 95814	rebecca.a.victorine@usace.army.mil	(916) 557-5162
Structural	**Rick Poeppelman** USACE	1325 J Street Sacramento, CA 95814	rick.L.Poeppelman@usace.army.mil	(916) 557-7301 (916) 557-7846 FAX
	John White Contractor	1325 J Street Sacramento, CA 95814	john.w.white@usace.army.mil	(916) 557-7295 (916) 557-7846 FAX
	Cecily Nolan USACE	1325 J Street Sacramento, CA 95814	cecily.m.nolan@usace.army.mil	(916) 557- 7472 (916) 557-7846 FAX
	David DePolo USACE	1325 J Street Sacramento, CA 95814	david.s.depolo@usace.army.mil	(916) 557-7276 (916) 557-7846 FAX
Cost Engineering	**Mary Diel** **USACE**	1325 J Street Sacramento, CA 95814	mary.r.diel@usace.army.mil	(916) 557-6833 (916) 557-7850 FAX
	Sherman Fong USACE	1325 J Street Sacramento, CA 95814	sherman.c.fong@usace.army.mil	(916) 557-6983 (916) 557-7626 FAX
GIS/Mapping	**Tom Sobolewski** USACE	1325 J Street Sacramento, CA 95814	tom.x.sobolewski@usace.army.mil	(916) 557-7419
Civil	**Dave Neff** USACE	1325 J Street Sacramento, CA 95814	david.l.neff@usace.army.mil	(916) 557-7846 (916) 557-7850 FAX

Geotechnical/ Geology	**Clark Stanage** USACE	1325 J Street Sacramento, CA 95814	Clark.E.Stanage@usace.army.mil	(916) 557-6766 (916) 557-7846
	Kim Jorgensen	1325 J Street Sacramento, CA 95814	kim.E.Jorgensen@usace.army.mil	(916) 557-5393 (916) 557-6803 FAX
Construction/Risk	**Darrell Pereira** USACE	1325 J Street Sacramento, CA 95814	Darrell.r.pereira@usace.army.mil	(916) 557-7760
Real Estate	**Dee La Sala** USACE	1325 J Street Sacramento, CA 95814	delia.m.LaSala@usace.army.mil	(916) 557-6868 (916) 557-7851 FAX
Materials	**Bill Halczak** USACE	1325 J Street Sacramento, CA 95814	william.halczak@usace.army.mil	(916) 557-7427

AMERICAN RIVER WATERSHED PROJECT

FOLSOM MODIFICATION AND FOLSOM DAM RAISE

QUALITY CONTROL PLAN

APPENDIX B

INDEPENDENT TECHNICAL REVIEW TEAMS (ITRT)

Post Authorization Change and Engineering Documentation Reports (PAC/EDR)

	Name/ Organization	Review Responsibility	Experience	Phone/FAX/E-Mail
ITR CHAIR	Grigor Grigorian Los Angeles District Corps of Engineers	Team leader	10+ Planner	Phone: (213) 452-3882 Fax E-Mail: Grigor.Grigorian@usace.army.mil
STRUCTURAL DESIGN	Phillip Sauser Sacramento District Corps of Engineers	Structural Design	10+ yrs structural design	Phone: (651) 290-5722 FAX: E-Mail: Phillip.w.Sauser@usace.army.mil
HYDRAULIC DESIGN	Charlie Mifkovic Consulting Engineer	Hydraulic Design	31 yrs hydraulic design	Phone: (916) 362-2598 FAX: E-Mail: mifkovic@lanset.com
HYDROLOGY	David Ford Consulting Engineers	Hydrology	33 yrs Hydrology	Phone: (916) 447-8779 Fax: (916) 447-8780
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SC-RB	Roger Setters Louisville District Corps of Engineers	Plan Formulation	18 yrs experience	Phone: (502) 315-6891 Fax:: (502) 315-6864 E-Mail Roger.D.Setters@usace.army.mil
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	Name/ Organization	Review Responsibility	Experience	Phone/FAX/E-Mail
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CIVIL DESIGN	Rick Torbik Sacramento District Corps of Engineers	Civil Design	19 yrs civil design	Phone: (916) 557-6698 FAX: (916) 557-7846 E-Mail: Richard.A.Torbik@usace.army.mil
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AMERICAN RIVER WATERSHED PROJECT

FOLSOM MODIFICATION AND FOLSOM DAM RAISE PROJECTS

QUALITY CONTROL PLAN

APPENDIX C

PANEL OF EXPERTS

This QCP will be updated to include a panel of experts when the Engineering Documentation Report get underway. The composition of this panel is yet to be determined.